

Grand Canyon National Park Wayside Exhibits

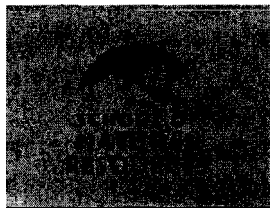
Formative Evaluation of the Outlet Fire Exhibits

Presented to the National Park Service
At Harpers Ferry Center

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Introduction

The National Park Service (NPS) provides information for visitors to enhance their visit to any given site. This information is also important in explaining the policies and actions of the NPS as it manages resources.

One way in which information is given to visitors is through wayside interpretive panels. These are placed at points of interest alongside roads/trails and in parking lots. These panels contain information about the resource the visitor is currently experiencing.

Outlet Fire Exhibits

In April 2000 a prescribed burn was started on the North Rim of the Grand Canyon National Park. As a result of exceptionally (and unpredicted) high winds on the 10th of May the fire escaped from its prescribed area and developed into a wildfire. By the 15th of June the fire had burned over 14,000 acres. At one time the North Rim of the park was closed and visitors were trapped at Point Imperial as the fire burned across the road between them and the exit road.

As a result of the high winds and heavy fuel loads on parts of the North Rim the Outlet Fire burned at very high temperatures. Because of this many trees (including the large fire tolerant Ponderosa Pines) were actually killed by the heat of the fire. As visitors drive into the park and out to Point Imperial & Cape Royal the results of the fire are clearly visible to them and in parts all that is visible is the burnt remains of trees (still standing).

To explain what had happened to visitors the NPS through the specialists at Harpers Ferry Center (HFC) designed a series of 5 interpretive panels to be positioned at various locations in the park. These were designed in conjunction with interpretive staff and fire specialists on the North Rim and South Rim of the park.

Communicating about wild land fire is an important topic for the whole of the NPS as well as other agencies such as the Forest Service (USFS). In order to see if this particular set of wayside exhibits were successful at communicating to North Rim visitors the role of fire on the North Rim, particularly in relation to the Outlet Fire a formative evaluation was undertaken by Sunita Hilton and Joe Heimlich of the Ohio State University. By gaining information about the effectiveness of signs before making them permanent the NPS has the opportunity to make any necessary changes and Improvements at a much earlier point and to gain a greater understanding of how their visitors respond to their messages.

Methodology

After much review by NPS employees the five signs were made into temporary (soft laminate) versions and attached to standard metal panel stands at the 5 points in the park.

The researchers (Hilton & Heimlich) then developed a series of open ended questions to ask visitors. These questions collect information on content and message reception and design factors such as color and the choice of graphics.

These questions and the process of visitor recruitment were approved by the NPS and Office of Management and Budget (OMB) and assigned the following protocol number: 1024-0224 (NPS 01-30). The questions were also approved by the Ohio State University Office of Research and Risk Protection.

These questions were then asked of visitors (participation was voluntary) in-situ within the park.

In relation to interviewing people at signs, if the researcher sits by the sign some people choose not to stop, if the researcher sits in the car for example, the opportunity is lost to get to the visitor fast enough if they're reading the sign from inside the car.

The Vista Fire

While this evaluation was being undertaken there was another wild land fire burning on the North Rim. The Vista Fire, unlike the Outlet Fire was started naturally by a lightening strike. For most of the time data was being collected the fire was being managed as a natural wild land fire and being allowed to run it's own course. However, on a few days the fire 'kicked up' and was actively suppressed by fire crews. The fire resulted in the closure of the Cape Royal road for 11 out of the 13 days of data collection. The fact that there was an active wild land fire burning in the park will have had an impact on results. Visitors were perhaps more interested in fire than they might have been **otherwise**.

Results

This formative evaluation approach provided much useful data; the raw data are available as an appendix. The following summarizes the results for each panel.

Panel No. 215 - **Fire on the Rim**

Located on Highway XX as visitors drive into the park.

In 13 days there were no visitors who pulled-off observed. In discussions with other NPS employees/volunteers, no one else saw anyone in the pull-off, with the exception of cars slowing to allow faster cars to pass.

This sign is wasted in it's current location, people at other signs particularly in the very burnt areas would have found this more interesting and able to answer their questions.

Recommendation: Overlay the Vista fire onto the map and place sign at other end of pull-out from panel no. 217 Mixed Blessings on Point Imperial/Cape Royal road

Panel No. 216 - **Maintaining Mountain Meadows**

Located at the first fully paved pull-off on the Point Imperial/Cape Royal Road, this second panel was also visited very little. Those who did stop felt the sign was informative and "beautiful ... visually attractive." The two parties appeared to understand the message of the sign and felt language use was good.

Recommendation: Perhaps adding an 'exhibit ahead' sign as in Carlsbad Caverns

Panel No. 217 - **Mixed Blessings**

Located in a complete pull-off that had good access but is located on a curve where there used to be picnic tables, this was a much more visited sign and generated the most comments. The evidence of the fire (burnt trees) was a dominant reason for people to pull in to view the scene and read the sign. There were several who saw the sign/pull-off too late on their way "in" and so stopped on the way "out." Overall, the individuals interviewed thought there was a good balance between words and pictures, and most took away as their understanding of the message that "fire is not bad," it's "natural" and a "positive thing." One individual understood the message as that of the "cycle of life." A couple understood the sign to be informing the visitor about being careful with fire and to not build a fire. One individual tied to sign to "propaganda based on the New Mexico fire..." Language use was considered by most to be "good" or "straightforward" and "understandable." Although comments suggest that there was not too much detail for the reader, one respondent suggested that the sign avoid "Americanisms." Some who read the sign still had questions, and desired information explaining how NPS does prescribed burns. Several noted a concern regarding a need for being aware of the sign in advance.

Recommendation: As above

Panel No. 218 - **Fire in the Pines**

Located in the Point Imperial parking lot near the picnic tables, this area was perhaps busier than 'normal' because the Cape Royal road was closed because of the Vista fire. In this location, individuals were observed intentionally moving to the sign to read it. Others were observed fighting distractions in order to read the entire sign. Several of those interviewed expressed the interest in the sign as a reason they stopped. As with the other interviews, there were a consistent number who stop to read all signs even when, as one individual stated "I read all signs don't always understand them, but read them anyway." The reactions to the sign were mixed. Many thought the sign looked "Ok," but often added "for black and white" or a similar comment. Others thought the black and white was effective and made the sign different. A few thought the text was ponderous, while others felt it was balanced and had "just the right words." Several noted that the text explained the situation well. The perceived message received by those interviewed tended to be on the value of fire (natural, sometimes good, not always bad) and on the NPS position/role in fire management. Although there were some who thought the verbiage "looked long" on the sign, most felt the wording was good, simple, and self-explanatory. Two suggestions were offered: 1) define "cathedral forest" and 2) label the two photographs to clarify "thick barked ponderosa." One person suggested that three pictures (before, during, and after) would increase the impact. Though several respondents noted that the sign was on the "wrong side" from the view, others liked the location near the picnic area.

Panel No. 2¹⁹ - **Living with Fire**

Located behind the Visitor Center's main doors on the path from the VC front door to the restrooms, this was a very busy area. By far, the comments suggest that this sign was the most appreciated/eye-catching. Several noted the striking photograph of the lightning as appealing. Again, there was a mixture between those who felt there was a good balance between words and pictures and a few who felt there were "too many words." The message received by the sign readers were more mixed on this sign. Though most understood the desired message to be the role of fire in the natural system or the value of fire/what NPS is doing with fires, there were a few that had a different interpretation: "stay in the car if it is lightning" and "be careful about fires." One person (from Iowa) questioned how "woodland fires affect everyone" and one cynical response related to "scientific burns that get out of control make me chuckle." Response to word use on this sign was strongly positive and noted that the sign is good and easy to read. There were some concerns regarding some technical words, the amount of time necessary to read the entire sign, and that the sign is not easy to understand if English is not the primary language. Compared to the pull offs, the placement of this sign was preferred and many noted it as a good location.

Conclusions

- Location was problematic for some signs
- Overall, the balance between words and pictures on the signs was viewed favorably
- In general, there is good word use on the signs (with ESL considerations excluded)
- The signs were seen as "attractive" if a bit "wordy"
- People "get" the big message
- There is little distinction among messages obtained from each of the signs... the big message is received, but the varied messages from each sign are less obvious to the reader
- Few note the "series" aspect of the signs which relates to the above observation
- Advance awareness of signs, and a means of connecting the signs would

**Grand Canyon National Park - North
Rim**

Interpretive Panel/Sign Interview Script - Data Sheets

Panel No. and Description.....
Date:
Time:
Weather & Other Conditions.....
.....
.....

Observed Behavior: (I noticed that you were.....could you tell me why?

1. Why did you stop here: Prompts - why did you stop here? How much of the panel did you read?

2. What do you think of this sign: (Prompts - what did you get from it? Is it attractive? Does it make sense? Is it too long? Are the writing & pictures clear to you? What about the pictures? Is it colorful enough?)

3. What did the NPS want you to know about by placing this sign here?

4. Understanding of words: Based on response to above? (Prompts - ecosystem, prescribed burn, fire-dependent ecosystem)

5. Other follow-up/clarifying questions:

GRCA - Outlet Fire
Wayside Exhibits
Data

Panel Number 215 - Fire on the Rim

Observations only

Location - on Highway XX as it enters the park, on a curve in the road with a gravel pull off

Observed Behavior

Driving past at pretty high speeds a minimum of 40 -50 mph Some slow down slightly - I surmise because they can see me If someone is behind someone else then the first person definitely does not stop because they are going to fast, the curve in the road and the gravel in the pull-off, also because of my vehicle there is less room in the pull-off. However, most people are just driving too fast and appear to be 'heading for the canyon' only.

Visitors are reading the park newspaper (park guide) as they drive past and the passenger is on the side with the panel and if the newspaper is open they can't even see the sign, never-mind have time to make a decision about stopping

Visitors leaving the park are too busy leaving and the pull-off is on a dangerous corner In 13 days I did not see one person stop get out and read the sign. The only people using the pull-off are those using it to let faster traffic pass them, they do not come to a complete stop during this process

Edge from pull-off gravel level is 4 - 6 inches below the paved road level, which is too much for many sedans.

Visitors would need some other reason to stop to read this sign - deer grazing might be enough to stop them.

Also, at this point they haven't really seen enough results of the fire (burnt trees etc) to make them want to know more.

Panel Number 216 - **Maintaining Mountain Meadows**

2 interviews 3 observations

Location - in the first pull-off on the Point Imperial/Cape Royal Road (paved pull-off)

Observed Behavior

Reading sign - after parking truck towing large RV in most of pull-off Family of 5 (2 adults, 3 children) reading the sign - read all of sign Other observations: one car stopped for 42 seconds to read sign from car Another car stopped for 45 seconds to read sign from car, a third car stopped for 32 seconds to read sign from car - assume read most of sign, but did not get out and appeared not to have any intention of getting out (drove off as I approached)

1. Why did you stop here?

Involved with park stewardship through the arts

Like to learn about other facilities throughout the States as visit

Sign made us stop - we saw the bright colors, we're a family of sign readers - then made us walk out into the meadow and explore, we found mushrooms to see - under the tree

2. What do you think of this sign?

Informative and visually attractive at the same time Beautiful sign

Tree gives good perspective on what it used to be like Color stands out - attracts and is eye-catching

Much better than other signs we've seen that are a metal plate with words/pictures engraved on them

3. What did the NPS want you to know about by placing this sign here? Particular natural resources and fragility and role visitor plays in its stewardship Fire important opportunity for informing visitors about parks

To learn about meadows and what goes on - life cycle Growth of forest and effect of fire on forest

Good perspective of what it was like before the tree fell over/died

4. Understanding of words/language?

Good language - as an educator difficult to present materials given diversity of visitors - but this is a good start

Good language

5. Other points/clarifying questions

1st visit - nice initial exposure - then go to rangers for more informative/investigation NPS does a wonderful job - impressed to be interviewed here today

NPS better than any other land managing agencies at communicating information

Panel Number 217 - Mixed Blessings 15

interviews 1 observation

Location - in the second pull-off on the Point Imperial/Cape Royal Road (paved pull-off) - complete sep. pull-off, used to be a picnic area

Observed Behavior

Stopping and reading sign - getting out of car

Swinging round on way from Point Imperial to get into layby - family reading sign

Stopped on way out to Point Imperial

Pulled over, father and son got out of car (mother stayed in car) - walked over and both read sign

Driving back from Point Imperial -turned into pull-out at VC end - read sign from car

Pulling over on way back from Point Imperial - getting out of car to read sign

Family of 5 in large SUV, driving out to Point Imperial, pulled in at far end, drove back towards panel, mother read all of panel to rest of family without anyone getting out of the

Pulled in on the way back from Point Imperial, drove to sign and read from car (passenger side)
Pulling into wayside and reading sign

Looking at sign - pointing and translating to each-other in Polish
Did not get out of car - takes too long with kids in tow
Observation only - reading sign from car, used horn to get people in front to move a long so could read from inside car

1. Why did you stop here?

Because we saw the burnt out trees we stopped

Fascinated by burnt areas - wanted information, drove past on the way out so stopped on the way back
Like reading signs - informative, stop at all laybys

Interested in fire - knew sign would be about fire - having seen fire signs so stopped
Like plaques/signs in general and attending range programs
Stopped because saw your (researchers) car - like to read signs
Wanted to find out cause of fire
Stopped at this panel because unable to stop at previous ones because of other cars parked directly in front - so even if had stopped wouldn't have been able to access signs to read because of other cars parked in front.
Did not read all of sign - missed picture labels

Wanted to look at the trees a little closer and read in paper (the guide) about the fire
Saw it on the way in, but couldn't make the turn, so stopped on the way out
On the way to Point Imperial saw board - stop on way back
Read all of sign slowly - as we speak French
Because saw burnt out trees stopped

See the fire, burnt trees ... could see the sign so stopped

On the way out to Point Imperial said read signs on way back, so seen this one on the way up and stopped on the way back
To find out more about the fire and read 'the guide', to take a picture to show people what fire looked like, read all of sign
To look at the pictures and surroundings (pointing to trees etc.)

2. What do you think of this sign?

Good balance between pictures and words
Good explanation
Not so long that you don't want to read it

Lots of tree species listed - but should be listed (as) here
Good balance between words and pictures
Explain more about aspens - need fire to re-grow to keep balance - so people understand more about what they are actually seeing and the details of the fire here - so more location specific
Looks like a good balance between pictures and

Good contrast - light words on a dark background

Pictures are fine

It's fine, pretty informative - not too many words OK

- no strong feelings

Interested in what sign had to say - because of what we see round here OK

- we could understand - clear even though we speak French first Good

balance between pictures and words

Good explanation

Not so long that you don't want to read it

Need to be bigger to read from car - main portion OK, smaller portion (about Goshawk) harder to read.

Children like the picture of the Goshawk - where did it go after the fire? Just

right - can read from the car which we like

Like before and after concept

Would like more in depth information

Before and after fire, good pictures, attracted by bird (Goshawk) Good one - lots of people don't think about fire being good Probably right balance between words and

3 What did the NPS want you to know about by placing this sign here?

Don't worry about all these burnt out trees - it's natural

Forest fires are a positive thing, controlled burns occasionally get out of hand though and this is what happens

Idea that fire is not a bad thing - don't panic

Fire regenerates life

Results of fire ... undergrowth re-growing

That fire was part of the process here

Be careful with fire

Basic information about what happened and regeneration

Appreciation for all things growing in the ecosystem

Information about what I am seeing now

This is the cycle of life, in order to generate new life old life has to die off As

drive through think what a tragedy, but just a part of life

Value of fire to source maintenance if you want to call it that

Cover up for letting fire get out of hand (joke)

Be careful with the forest because in ancient time natural fires, now human presence so nature doesn't work

Don't worry about all these burned out trees - it's natural

About the fires, think the sign was put here because/stimulated by questions people would have about the fires

Purpose is to answer people's questions

Don't build a fire

Still pretty even though burned

Propaganda based on New Mexico fire that got away from them

Things can't grow unless burn

Before and after fire

The forest is good when it gets burnt naturally, fire is good

Old practice of fire suppression may not have been best and fires natural for forest and good for

4. Understanding of words/language?

Language seems fine

Our kids think language is OK 'plant community' - understand OK

Terminology OK - nothing else too long Good language - not trouble

understanding ... not too much Avoid 'Americanisms'

'emergence of quaking aspens' - did not understand this

More detail on fire suppression, is fire getting out of control scary? - what actually happens

Pretty straightforward and easy Main facts presented Straightforward - easy

to read, most people could understand this Prescribed fire - says man doesn't

have a lot of control over nature Good language

Very simple - good to understand - even for us (French speaking) Language

seems fine

Pretty understandable - not too great a detail

Familiar with terms used as read lots of signs wherever we go

Did not read (looked at pictures) from Poland and not good English Know all the words

OK language, kids included could understand terms such as ecosystem from school

5. Other points/clarifying questions

Good place to put a sign - room to pull off road safely

Can't see picture from road, so less inclined to stop - but had seen the ones down the road so decided to stop. Other ones down the road can see pictures as driving by.

Good layby - on to quickly on the way out (to Pt. Imperial) - might need a sign warning pull-off/info. Ahead

In general need more information

Do a panel to explain how NPS does prescribed burns (this would be a good ranger talk) Why trees cut/dead by the side of the road, was that done before or after the fire? Or to stop the trees burning and falling across the road and spreading it across to other side? Still have lots of questions about fire which the sign did not answer

Need a pull-out - could see back of panel Stopped on way out to Point Imperial Positioned poorly - didn't see it from the road right away, if see from road clearly other people would stop - turn-out not clearly marked - maybe have a sign

Good space - don't hide it, wouldn't have stopped here if hadn't seen sign

Nobody will stop here - nothing to see, put at a viewpoint

Tell people to stop here to see different species of trees

Good place to put a sign - room to pull off the road safely

Good place to put a sign - like the pull-offs - good way to share information Good place for a sign as sign should be where lesson is

VC not very informative - too commercial so signs a nice change - like and need the information for our visit

Good location because of fire

More information i.e. how big an area is set for a prescribed burn, how many people needed etc.

Panel Number 218 - **Fire in the Pines** 15 interviews

Location - Point Imperial Parking Lot, near picnic tables

Observed Behavior

Walked across parking lot, stopped at sign

Reading sign after crossing parking lot to read ... before going down Point Imperial overlook

Coming over to read sign while researcher interviewing previous person - wanting to participate

Reading sign while drinking soda in a cup - rest of family sitting at picnic tables

Reading sign

Purposeful walk across parking lot/road to read sign

Second visit back to sign - first registered its existence, daughter took off down Point Imperial trail/overlook then came back

Reading sign - even though children pulling adults away - stayed to read whole sign Family reading sign, 2 parents and older daughter (has MS in Natural Resources, full time USFS in 1. Why did you stop here?

On the way to trash can, read signs anyway

Drawn by curiosity

Interested in before and after and need for a good fire

I read all signs anyway

Would probably have read sign anyway

My son (older as with grandchildren) pointed it out to me

Read all signs - don't always understand them but read them anyway

Seen fire on drive up and wanted to know more, read part of sign - looked at pictures and surroundings (gesture), local environment to compare

Love to come to park and have information about what looking at available

Like to read signs and see if anything special that explains what can see while visiting -
(English not first language)

Saw signs, read ³/₄'s - read part way, then saw picture of squirrel - so read that
information instead of finishing history section, because interested in squirrels and
picture eye-catching

Felt guilty so read sign

Seen lots of signs (and read them), some repetitive, fire a big focus for signs and
paperwork, i.e. 'the guide'

Like to read signs and see what NPS saying, information on env. causes

Like to see pictures and put name to things seen

2. What do you think of this sign?

Very interesting rejuvenating the forest floor

Black and white picture OK

Good short read - not too long and wordy

Nice before and after pictures

Black and white - excellent

OK - contrast not dramatic enough, color picture with green undergrowth - need picture of
what fire does

Black and white picture looks like a burn

Text - ponderous reading, need a grabber "our recent fire . . ." relate to drive up "As you drive
up here today did you ... Look at all the wonderful ..."

Layout sucks - typical government text layout - be creative - this is 'hackneyed'

Liked sign

Impress you with value of certain kinds of fire

At first glance the black & white picture looks like its burned (forest) - kind of deceiving
Show picture of forest after burned would be helpful and then regeneration picture after fire
Informative sign about fire cycle Impressed with how current sign is Something people need
to know Interested in squirrel (Kaibab), might say more about that, unique to area

When first saw black and white picture thought old picture - showed difference between
current and past conditions

Explains stuff very well and clearly

OK balance between pictures and words, black and white photo - think of black of fire, no
green on trees - as opposed to long time ago

Information in a nutshell, not too much information and kids could read

Like the mix - black and white sometimes says something different from color so good

Like photographs - seeing them makes you want to read about the picture

I'm interested in the Kaibab squirrel

Just right words - too many scares away especially as have kids and they're always
wanting to go

Looks good, black and white OK, especially for what showing - nice link Connection
between words and pictures not so clear if don't know about Ponderosa already - good
language

Try Helvetica font - often easier to read, so no little bits on ends of letters like 'f' Not too much writing
Black and white - looks initially like burnt forest, but still got historical perspective if read everything too
Would be nice to have picture of burn sections in-between healthy and unhealthy Good pictures
Prefer bullets to long paragraphs
Visually pleasing
Like black and white - personal preference
Writing clear and easy to read
Label pictures a little more clearly - unhealthy, overgrown, natural Great
black and white photographs, label 'pre-Smokey the bear,' Really like graphics and the text, just label the pictures

3. What did the NPS want you to know about by placing this sign here? To know more about the park and the signs of fire I've seen
Fires not always a bad thing and if going through a national park should be prepared to see burn signs
Wanted you to know protecting resources and not interfering with natural process - we're the good guys
You shouldn't start fires, but if they start naturally should let them do what supposed to
Understand that even something that appears simple like fire through the forest is not simple at all but part of a complex web
That certain kinds of fire can be useful to the forest

Fires role in forest and why NPS changing philosophy/policy on burning Fires are necessary and we did wrong by suppressing them for so many years Some fire is natural and good for environment
Educate to become ecologically responsible to preserve

Trying to prepare public for low intensity control burns and idea that not all normal fire is bad
We see a need to preserve environment over specialist interests

That fire is a natural part of the process in the park, not that we want to go setting fires (response after rereading first sentence)
That it's OK that the forests burning - don't freak out and interesting that fire was (historically) suppressed for so long
Fire clears green picture - looks like

Naturally have fire to balance, humans help to mimic natural conditions

What's happening/happened when see fire scars on trees on way up - learning fire important in parks
Feeling that burn good/healthy thing not problem Supports what hear in the media/message
Knowing that forest is what it is and whatever we do to interfere will just get in the way of natural stuff
Periodic fires are necessary to clear out brush
Fire is normally healthy
Little fires don't make it up to crowns

4. Understanding of words/language? Good

words - fine

Good language

For average High School level and up OK, 6 grade might have some trouble I'm used to all the words - see most of them often enough

Pretty self explanatory - nice simple language Words OK

but look long on the sign

Words easy to understand - not too long or too complicated

Perfectly readable, some words that others might not know but keep them in 12 - 14 year olds - would be good for them to learn

Good understanding of concept - not of specific words

MS in natural resources - so understand all, most people could understand this information though

Understand can learn more

Words - don't know what a cathedral forest is, otherwise is OK

5. Other points/clarifying questions

OK location, on the way to something else - did choose to stop at canyon overlook signs

Good location - where most people go past, maybe more in your face - next to the NW overlook

Need 2 turn outs - show difference between where burned through aspen and not 3

pictures - before, during and after fire

Location - cars parking in front of it make it less visible - but if people see it, it does attract attention

Wondered about traffic/visibility of sign here because view is other side - wondered how many people would come over here, bet <10% of visitors come over here

Not sure on this side of parking lot (as a location) - near restrooms - try other side? But then no fire/trees, ? end of parking lot (near trail)

This is as good a place as any to put a sign Obvious place to put a sign and in picnic area

Good place to see a sign - like the signs at the overlooks too

If you read 'the guide' already got the information, different information is that it's ponderosa, healthy versus unhealthy ponderosa

OK location - saw lots of fire damage on the drive, problem if put on start of trail is that not many people would see it

Normally expect on edge/overlook, but not obvious so people might miss sign altogether

Very little information on ecology in general in parks - so like this sign

Sign location - good to attract and then visitors can go look at trees etc. if further back might make it to sign and near restrooms so lots of people here

Good place for signs at trail heads and parking lot

Location - noticed after walking on trail - as opposite trail entrance, would not have seen it before as heading straight down to overlook

Good place to put a sign because of restrooms

Panel Number 219 - **Living with Fire**

15 interviews

Location - outside the main visitor center restroom, on the side closest to the main parking lot

NB - while most of these interviews were undertaken the Vista fire was burning fiercely, visitors commented on seeing more smoke on S.Rim as well as from Vista fire on N. Rim

Observed Behavior

Stopped to read whole panel

Whole family stopped to read, 2 adults, 3 children Stopped even though heading for restroom Waiting for wife

Reading sign while waiting for tour group leading to go to restroom (first language Italian)

Family reading sign

Reading sign, one translating for the other 'Oh wow'

Beeline for sign after returning from trail to Bright Angel Reading sign

Read sign - all of it

Reading sign while waiting for someone to come out of restroom

1. Why did you stop here?

Read all of sign - enough information - better than pamphlet on fire handed out To read the sign - lightening a draw and fire starter - bright yellow

Saw lightening in picture - read some of the sign

Normally stop to read signs

Read all of sign - stopped because wife in restroom

Interesting - seen fire before so interested, was in Yellowstone for big fire and just came through Jacksonhole (currently big fire)

Waiting for rest of family to come out of restroom

Waiting for friends in restroom ... and interested to read anyway

Lightening caught eye - read all of sign

Lightening picture attractive

Happen to be a firefighter in NJ, so interested in anything to do with fire and wild land fire, we're also schoolteachers and interested in education

Hiked out to Woofors ... wanted more information on fire as could see where there had been fire before

Curious about ecology of ponderosa pine - bark is very interesting

Husband in restroom ... read all of panel

Waiting for someone to come out of restroom

Stop and read a lot of signs at parks anyway so read this one too

2. What do you think of this sign?

Interested in content as opposed to pictures - words and information were the attraction not the picture

Read all the words

Like it - pretty attractive, eye-catching - that's why stopped

Living with fire - title was eye-catching

Good balance between words and pictures Looks nice - can't avoid it when pass it Smoke picture good as drove up through smoke today on way into park All pictures very attractive

Information about fires ... went to S. Rim yesterday and could see smoke but no information yesterday ... so good picture of smoke as what saw yesterday Pretty good words/pictures balance

No more words - otherwise too much to read, good balance

Love pictures of lightening, then fire

Add a graph of % human involvement

Add a graph of all fires in park and reasons for each

Pretty high level for what I needed - knew most of information anyone - good picture

Nice - like it

Attractive and informative

Graphic - lightening caught my eye

No more words, could cut out 1/3 for most Americans

Pictures with larger captions would suit most Americans

Very informational

Good balance picture vs. words Lightening really amazing

picture Initially eye-catching with lightening - then go onto

read it. Good balance - not too many words 'BS' on it

3. What did the NPS want you to know about by placing this sign here?

What doing with fire and why controlled fires on NPS places

Good place to put a sign

Wild land fires affect everyone? (Not sure about Iowa where we're from)

Fire is natural

NPS is trying to and working with fire and prescribed burns - trying to have natural burn process

Be careful about fires Stay in car if lightening Have to live with fires and let nature take its course rather than man have to do it Mother nature knows best - have to have fire to generate growth

To keep park as it was naturally, like before

Natural fire is natural thing, not something you should worry about when visiting the park

Understanding of fires role in system here

That fire is used to improve/manage plant communities Fire important on this side of rim compared with the S. Rim Natural forest fires and how suppressed and now have to make prescribed fire to fix Fire is dangerous, but also start fires to control conditions in the park

Fire picture is unnatural fire

is to be expected

Part of nature and humans can hurt natural system

Fire's OK so don't get too scared or angry if you can't go to Cape Royal

Sometimes fires are necessary

Scientific burns that get away make me chuckle - so interested in sign

That we need fire and that it's natural before suppression over last 120 years Changing ecosystem with suppression, but \$1,000,000 home 'don't let it bum'- even though fire natural process

That we (the NPS) are managing the forest way we should be Educational - sometimes we have to help mother nature along Make sure have forest fires that aren't natural and why we do things in the parks - such as start fires

4. Understanding of words/language?

Understand all concepts and words presented

Suppression -planning for wildfires

Idea to reduce risk

Just be careful of fires - some words too technical so didn't read

Good language and understandable for everyone

Good to read

Not easy to read if not an English speaker ... long words (first language French) OK with words

Not sure why sign?

Appropriate, not too simple but good if take time to read ... i.e. if a high school student Quite readable information - good choice of words

Language good didn't have to say 'what are they trying to say' so must be OK Used (familiar with) terms - ecosystem and managed burn

Real easy to understand

5. Other points/clarifying questions

Daughter would have stopped - in fact she was attracted by lightening

Father noted that as a family they normally stop and read wayside signs, although some are a bit like going to school again - but like them because education and tell about park visiting

Good location for sign as everyone goes by restrooms

We always stop to read signs

Very good place everyone needs restroom and near parking

Good place to put a sign - place where lots of people because of distance to here

Good place to put a sign - close to park information

OK to put sign here

Catch a lot of traffic at this location

Grabs attention, good place for here, or right outside the visitor center door. If had a message wanted to give this would be a great place
OK location for a general sign

Pull-offs/laybys - not good for kids, but if didn't have kids with us, wife and I would stop at all of them

If want people to see it - this is a good place as people wait around here ... because of the restrooms

Captive audience here is good spot - probably highest through

Other general comments for GRCA staff made by visitors

In general we were shocked to see people throwing cigarette butts out of cars (here at GRCA and Bryce and Arches) and feeding animals and go off path/trail at viewpoint VC
not very informative - too commercial